

Storm Signals

Data Collection

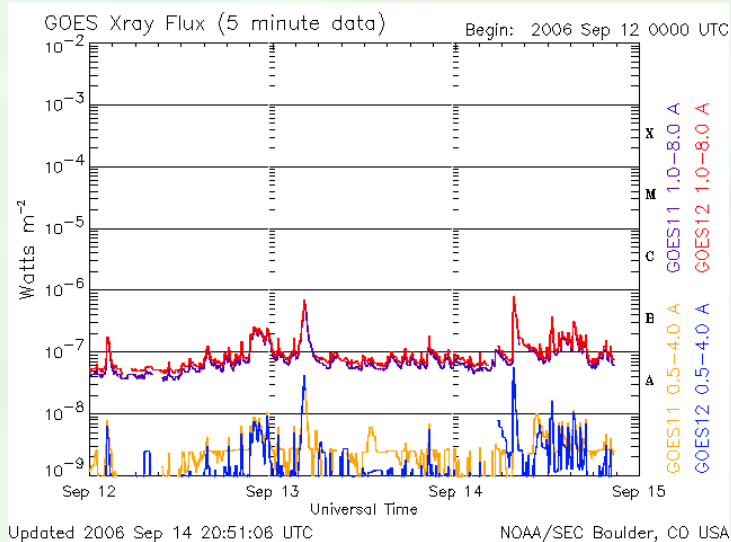
For all data start on the following page:
"Space Weather Resources"
<http://son.nasa.gov/tass/tools.htm>



- Open "**University of Florida**"
- Click "**run**"
- Enter "**RJ15**", "**10 sec**", and click "**run**"
- Now you should see a graph that has a red line on it. The sharp spikes in the above graph are usually due to man-made signals or lightning strikes. A solar storm would show a gradual rise and fall in the signal over several seconds to several minutes. The graph would look somewhat like a shark fin.



- Go to “**GOES 5 min X-ray plot**”

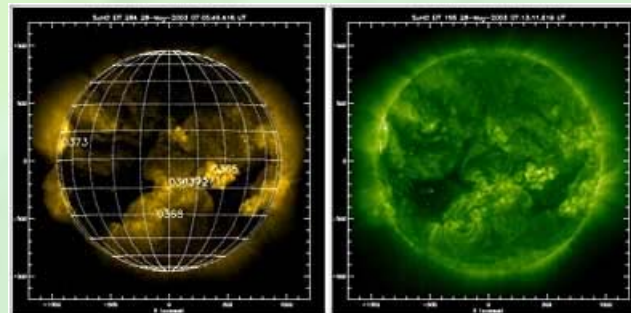


Look at the red line, which is from the GOES 12 satellite. Using the solar x-ray activity scale along the right side (A,B,C,M, and X), determine if there have been any solar flares over the last few days.



Has any data been recorded today that indicates that a solar storm might be heading toward Earth?

- Have there been any solar flares or coronal mass ejections today?
- Did the intensity of x-ray emissions from the Sun increase?





- Solar flares and coronal Mass ejections (CMEs) emit a broad range of light and most of this light is invisible to us.
- Scientists monitor the Sun using instruments that detect many of the different kinds of light emitted. For detecting solar storms we will use radio waves, x-rays, and ultraviolet light.
- Radio waves are especially useful because they can be measured by instruments on the Earth and in interplanetary space.
- Scientists put instruments on satellites to detect X-rays and ultraviolet light because the Earth's atmosphere interferes with emissions of these kinds of light from the Sun.
- You will use radio and x-ray data to tell you when a major solar storm has taken place and where on the Sun that storm occurred.